

SensorTec PANORAMIC SOLUTION



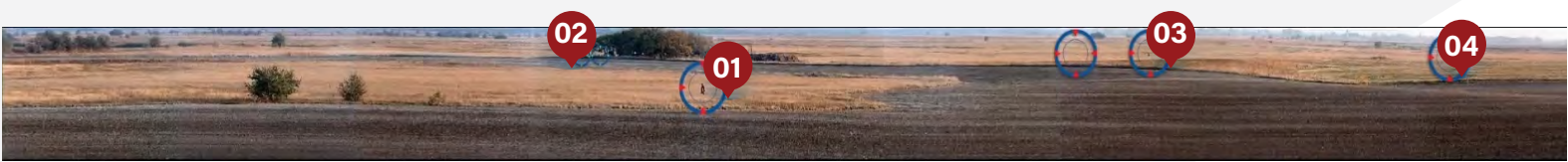
Challenges of **WIDE AREA SURVEILLANCE**

Effective wide area surveillance is a great challenge. a traditional system using dozens of low-resolution cameras are not able to effectively cover a vast area. if operators have to scan through a large number of camera images important things might go unnoticed. installation and maintenance is also time consuming and expensive with a traditional system

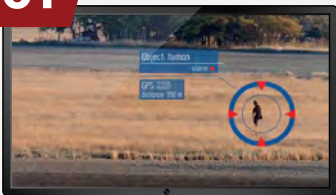
SensorTec on the other hand has an effective Panorama solution that can observe an area from a single viewpoint and solves many issues of wide area surveillance

SensorTec PANORAMA SOLUTION

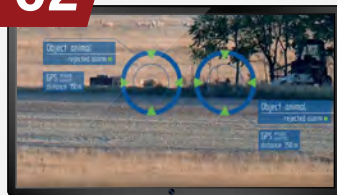
200/320 MP high-resolution Panorama cameras which are able to continuously monitor immense areas. As all potential threats have to be detected even after nightfall. Thanks to the high-resolution footage and advanced VCA technology, the tracking of multiple targets is also possible.



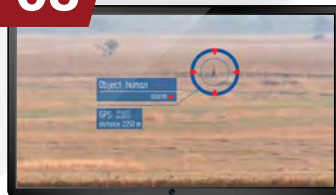
01



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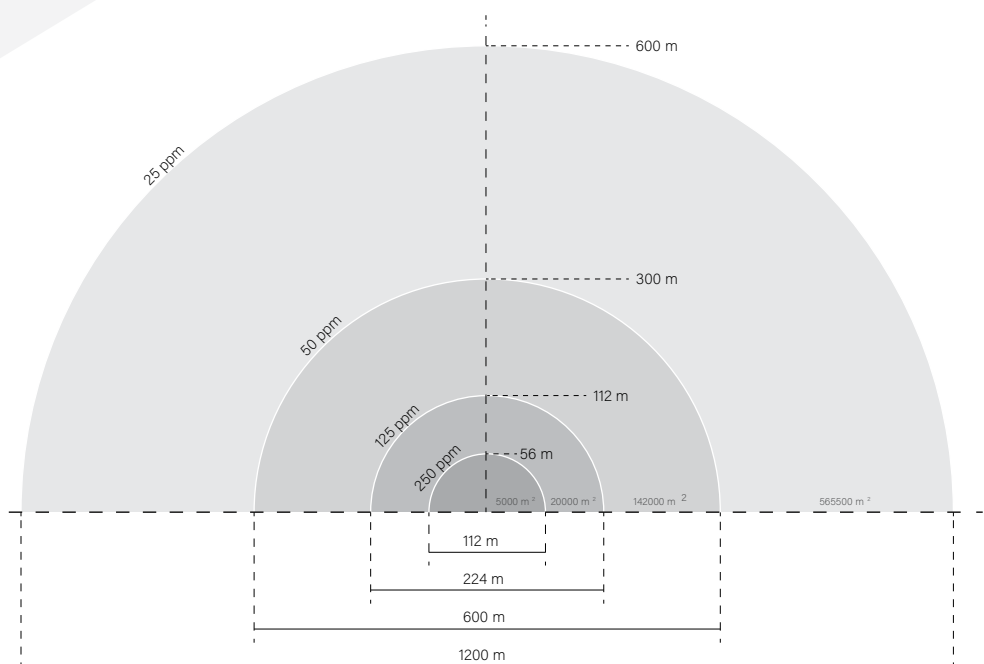
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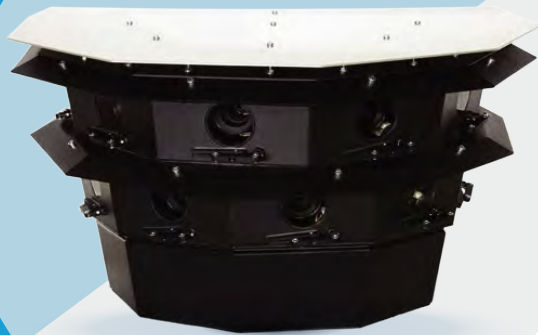
04



- 250 ppm - Identification
- 125 ppm - Recognition
- 50 ppm - Detection in VCA
- 25 ppm - Detection by operator



200 MP Panorama camera



The panorama camera is enduring. The all-metal construction of the camera housing with quality glass windows and sun-shields in front of each lenses result in a massive, robust, reliable construction so that the camera can always deliver quality footage. operators can order the panorama camera to clean itself, thanks to its water tank and wipers. The device gives warnings if the water tank needs to be refilled and can start the cleaning procedure automatically.



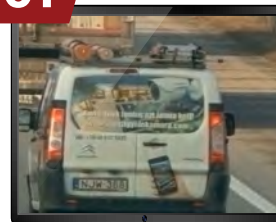
our engineers have developed a multi-sensor SensorTec 200 MP Panorama camera that was specifically designed for meeting the surveillance requirements of wide areas. it can deliver a 200 MP or even higher resolution panoramic images at 20 FPS . The camera can operate in extreme environments. it can be equipped with the desirable thermal control solution to perform well in high or low temperatures and both humid and dry conditions. The fans, the heat pipes, the glass heating, and the peltier make it sure that the camera always stays at the required operational temperature.

320 MP Long Range Panoramic camera

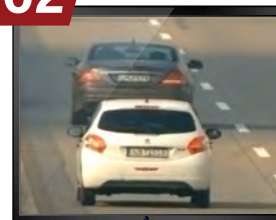


The 320 MP Long Range Panoramic camera produces hundreds of megapixel large images on which every detail is clearly visible in all lighting conditions. The camera provides wide dynamic range images, have an improved low-light performance and extra high sensitivity. This camera is able to cover large areas up to 8 Sq. kilometer with high resolution from a single viewpoint. The panoramic images ensure an expanded view.

01



02



Operators in the Command and Control Centres can easily scan through the entire monitored area watching live streams of SensorTec cameras. The 320 MP panoramic images ensure better spatial awareness for operators, as they display large areas simultaneously and the relative positions of natural formations help operators in orientation.

Additionally, the Video Monitor contains zoom windows for the panoramic images, as well as thermal and normal PTZ camera images and, if needed, associated maps.

If an alarm arrives from an area, the ePTZ function is activated on the panoramic images and the related zoomed areas are displayed in zoom windows.

Unlimited Possibilities



► Augmented Reality

The system merges visual and text information, visualizes automatic detection and prediction results and displays them together on an interactive interface.

Augmented Reality Solution provides several intelligent, VCA functions that are able to detect and even predict different incidents and situations that may occur at the site.

► PTZ Integration

The panorama camera can work together with the MP or the Full HD SensorTec PTZ camera and the 20 MP SensorTec ONE camera. The PTZ can be controlled on the panoramic images. also, intelligent functions such as the ePTZ or the PPM expansion that make surveillance easier and solve dynamic situations.



Flexible & scalable Backend solution



► Network Video Recorder

The solution is flexible and one can choose from different SensorTec Network Video Recorders that were specifically designed so that they can serve our solutions efficiently. SensorTec recorders have up to 128Tbyte storage capacity and can be customized to individual needs. The network video recorders can record the high-resolution images of the SensorTec cameras at even 7 gbit/sec recording speed.



► Video Management Software

The large panoramic images are easy to handle with a self-developed video management software, the Control Center. It is also possible to search and play archive recordings back, which is needed in later law enforcement procedures when it is essential to provide footage of the incidents. Video surveillance is therefore much more simple and efficient with the SensorTec system. The Control Center handles a stitched panoramic image as a single image. Security operators in control rooms are much more likely to spot suspicious activities while looking at one high-resolution panoramic image than working with dozens of separate images.



Features and Functions



► Image stitching

The Control Center has an intelligent stitching function that makes it possible to create large panoramic images. The images that are produced by individual sensors are not simply overlapping, but are geometrically transformed for accurate merge.



Competitors' without image synchronization



The SensorTec panoramic image with image synchronization

Image synchronization

The SensorTec Panorama camera images are synchronized, resulting in a flawless view, as there is no glitch and observed objects can appear in the footage as they are.





Competitors' without white balance correction



SensorTec panoramic image with white balance correction

White Balance Correction

The Control Center provides efficient white balance correction as well to smoothen the color gradient between the stitched images. This successfully creates a natural, quality footage.





Intelligent Zoom Functions



► Sens-zoom

The Jpeg2000 standard stands as a basis for the Sens zoom function that makes it possible for our nvr to store images in full resolution, but send only the required, zoomed picture area in high resolution to the monitoring center, while the rest of the image is sent in a lower resolution.

► PTZ control

assign a pTZ camera to the panorama by placing guidance points on both images to be able to control the pTZ on the panoramic image. another Control Center function allows the operators to control the pTZ cameras by clicking the required areas on a map.

► ePTZ function

Define areas in the panoramic image to have a SensorTec pTZ camera automatically turn and zoom to these areas when trigger events happen. also, a zoomed area of the panoramic image is displayed in a special zoom window.

Safe policeman feature

The SensoTec Safe policeman feature can also acts as an important part of the solution. There could be many dangerous situations when a policeman or a security guard needs extra help. with this feature the person who is in trouble can press a button triggering an event in the Control Center. Based on the gpS coordinates the assigned pTZ camera can turn to the area automatically so that operators are able to see the situation clearly and give instructions or send help.

PPM expansion

Select a priority area within the area observed with panoramic images. Set a SensorTec One camera with higher ppm value to make operators able to continuously monitor this area at an even higher resolution.



► Strengths of the solution

- The SensorTec cameras panorama solution provides large panoramic images with a resolution high enough for face recognition.
- The sharp and clear SensorTec footage can act as irrefutable evidence in later law enforcement procedures.
- The self-developed SensorTec Control Center ensures the convenient management of footage and as it is, easy to learn, the training of operators can be fast and time-saving.
- The components of the Panorama solution utilize scalable JPEG2000 image compression standard that makes it possible to remain bandwidth effective.
- Maintenance is also easy and cost-effective as less devices and resources are needed.

SensorTec End-to-End Surveillance Solutions

See how our Panorama solution forms the important basis of several SensorTec end-to-end surveillance solutions.

► Critical Infrastructure Video Surveillance solution

The Panorama solution can aid the protection of national security by effectively covering critical areas that are of great importance and under a more significant threat. Thanks to the panoramic images critical situations are more easy to be understood that supports quick decision making and makes it possible to have a much better control of any situation.



Safe City

Smart Solution



As panorama cameras can cover wide areas one of their application areas is in smart cities. The intelligent zoom functions make surveillance easy and reliable.



The SensorTec 200 mp panorama camera plays a crucial role in border control surveillance as it can cover long stretches of borders and help by detecting suspicious objects even at a long distance that makes it possible to prevent illegal activities and react to potential threats.

Border Control

Surveillance solution

Airport

Surveillance solution



with the help of the panorama cameras the large and crowded indoor and outdoor areas of airports can be covered effectively. It is easy to work with the large panoramic images of the SensorTec Panorama camera, leading to more secure airport environments.



The Virtual Panorama camera was specially developed for video surveillance in stadiums. Its flexible camera structure is the best for all stadium designs and sizes. The large panoramic images ensure face recognition at every seat in the stadium, resulting in a safe and secure venue for all spectators.

Stadium

Surveillance solution

ABOUT US...

SensorTec is a security systems manufacturer whose mission is to deliver the latest technology based solutions for the most challenging of security threats. We specialize in manufacturing custom innovative solutions for military, law enforcement, public authorities and private sectors. Our solutions allow end-users to gain greater flexibility, control and security of on-going field operations with an enhanced ability to proactively respond to any security threats.

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